What is claimed is:

1. A melt-spun fiber having a core-sheath structure and a tensile strength of at least 15 cN/tex whose core contains a synthetic thermoplastic polymer which is not a fluoropolymer and whose sheath contains at least one melt-spinnable fluoropolymer and particles comprising electroconductive material.

2. The melt-spun fiber of claim 1, wherein the synthetic thermoplastic polymer of the core is a polyamide and especially a polyester.

3. The melt-spun fiber of claim 2, wherein the polyester is a polyethylene terephthalate.

4. The melt-spun fiber of claim 2, wherein the polyester is a liquid-crystalline polyester.

5. The melt-spun fiber of claim 1, wherein the melt-spinnable fluoropolymer is a copolymer of tetrafluoroethylene with at least one alpha-olefin, preferably ethylene.

6. The melt-spun fiber of claim 1, wherein the melt-spinnable fluoropolymer is a polyvinylidene fluoride.

7. The melt-spun fiber of claim 1, wherein the sheath contains up to 50% by weight and preferably 2 to 15% by weight of electroconductive particles.

8. The melt-spun fiber of claim 6, wherein the sheath contains between 2% by weight and 15% by weight and especially between 4% by weight and 9% by weight of electroconductive particles.

9. The melt-spun fiber of claim 1, wherein the particles comprising electroconductive material consist of carbon, metals or metal alloys and are especially carbon black or graphite.

10. The melt-spun fiber of claim 1 which is a filament, especially a monofilament.

11. A process for preparing the melt-spun core-sheath fiber of claim 1, comprising the measures of:
    i) selecting a first polymer which is a synthetic thermoplastic polymer and not a fluoropolymer and which has a first melting point,
    ii) selecting a second polymer which contains particles comprising electroconductive material and which is a melt-spinnable fluoropolymer which has a second melting point at least 20°C below the first melting point,
    iii) coextruding the first polymer and the second polymer through a heterofilament spinneret at a spinning temperature above the first melting point to form a bicomponent fiber having a core comprising the first polymer and a sheath comprising the second polymer and
    iv) drawing the produced core-sheath filament to increase the tensile strength.

12. The use of melt-spun core-sheath fibers of claim 1 for producing industrial wovens.

13. The use of claim 12, wherein the industrial woven is a paper machine wire, a filter cloth, a screen printing cloth, a conveyor belt or a reinforcing ply.